

WNV Surveillance Summary, 2002

Arbovirus Surveillance Program Infectious Disease Laboratory Division

Birds

In 2002, 10,125 dead birds were reported to the Massachusetts Department of Public Health (MDPH) Arbovirus Surveillance Program. Of the 857 that were tested for WNV, 495 crows, 71 blue jays, and 9 other species were positive for WNV (table 1). WNV (+) birds were found in 113 towns in all 14 counties, compared with 153 towns in only 9 counties in 2001.

Dead Bird Surveillance in 2002

| | Species | | | |
|-----------|---------|----------|-------|--------|
| Status | Crow | Blue jay | Other | Total |
| Reported | 3694 | 837 | 5627 | 10,158 |
| Submitted | 758 | 181 | 57 | 996 |
| Tested | 657 | 162 | 38 | 857 |
| WNV(+) | 495 | 71 | 9 | 575 |

In 2001, 93% of all WNV (+) birds were crows or blue jays and, in general, a crow or blue jay was the first WNV (+) bird for a town. Therefore, MDPH restricted routine WNV testing to crows and blue jays in 2002. As a consequence, the number of birds tested and the number WNV (+) decreased in 2002, and the percent positivity of tested birds rose from 46% in 2001 to 67% in 2002.

Mosquitoes

Sixty-eight of 6,471 mosquito pools tested were WNV (+) during the 2002 transmission season. Positive pools were identified in 33 Massachusetts towns in 7 counties, an increase from 2001, when 25 WNV (+) pools were detected in 22 towns. Positive mosquito pools included 18 pools of *Culex pipiens*, 6 pools of *Culex restuans*, 42 pools of *Culex species* (mixed *Cx. pipiens* and *restuans* pools), and 2 pools of *Culiseta melanura*.

Horses

Two horse cases of WNV were detected in 2 counties in 2002. This decrease from 45 laboratory confirmed cases from 4 counties 2001 was likely due to the availability of a conditionally licensed vaccine. The vaccine is now fully licensed by the USDA.

| City/Town | Onset Date | Virus Result |
|-----------|------------|--------------|
| Granville | 09/08/02 | WNV |
| Ipswich | 10/09/02 | WNV |

Humans

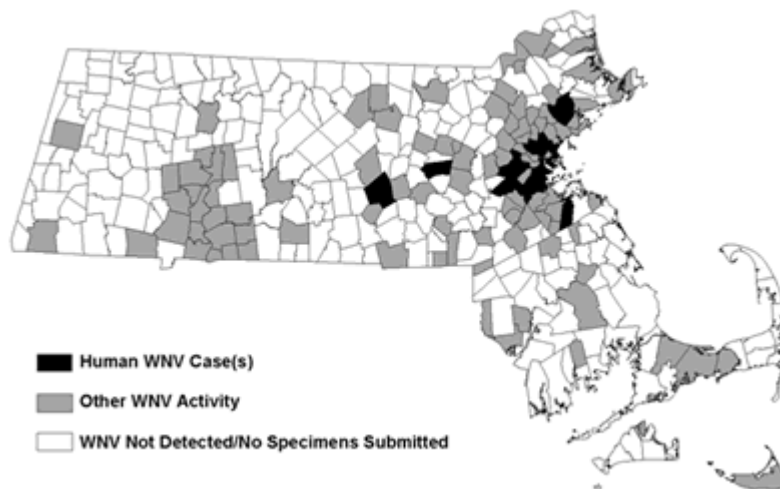
Twenty-four human cases of WNV were identified in MA in 2002, compared to 3 in 2001. Two of these cases were in out of state residents; however, their exposures were believed to have been in Massachusetts. Human cases came from 14 towns in 5 counties. The ages of cases ranged from 10-91 years in 2002, although the 3 fatalities were 80 years or older.

| City/Town | AgeRange | Onset Date | Virus Result | Clinical Presentation |
|-----------|----------|------------|--------------|-----------------------|
|-----------|----------|------------|--------------|-----------------------|

| | | | | |
|--------------|----------|---------|-----|---------------------|
| Needham | 25-44 | 8/2/02 | WNV | Encephalitis |
| Revere | 25-44 | 8/13/02 | WNV | Fever |
| Revere | 45-64 | 8/21/02 | WNV | Meningitis |
| Peabody | Over 85 | 8/23/02 | WNV | Meningoencephalitis |
| Out of State | 65-84 | 8/23/02 | WNV | Meningitis |
| Medford | 45-64 | 8/26/02 | WNV | Meningitis |
| Melrose | Under 18 | 8/28/02 | WNV | Meningitis |
| Medford | Over 85 | 8/28/02 | WNV | Other |
| Watertown | 25-44 | 8/30/02 | WNV | Fever |
| Boston | Over 85 | 8/31/02 | WNV | Encephalitis |
| Belmont | 45-64 | 9/3/02 | WNV | Fever |
| Weymouth | 65-84 | 9/3/02 | WNV | Encephalitis |
| Boston | Over 85 | 9/6/02 | WNV | Encephalitis |
| Danvers | 45-64 | 9/7/02 | WNV | Meningitis |
| Boston | 45-64 | 9/8/02 | WNV | Meningoencephalitis |
| Out of State | 25-44 | 9/12/02 | WNV | Fever |
| Boston | 65-84 | 9/13/02 | WNV | Meningitis |
| Newton | 65-84 | 9/15/02 | WNV | Meningoencephalitis |
| Malden | 65-84 | 9/15/02 | WNV | Meningoencephalitis |
| Medford | 65-84 | 9/21/02 | WNV | Meningitis |
| Marlboro | 65-84 | 9/24/02 | WNV | Meningoencephalitis |
| Worcester | Under 18 | 9/26/02 | WNV | Meningitis |
| Boston | 45-64 | 10/1/02 | WNV | Meningitis |
| Weymouth | 65-84 | 10/5/02 | WNV | Meningitis |

Massachusetts summary map and table. Additional maps and line listings of positive results by city or town can be accessed at <http://www.state.ma.us/dph/wnv/wnv1.htm>.

WNV Activity in Massachusetts by City or Town, 2002



Specimens Submitted and WNV (+) per Year

| | Number WNV Tested/Positive | | | |
|----------------|----------------------------|------|-------------------------|-----|
| Species | 2001 Tested Positive | | 2002 Tested Positive | |
| Birds | 2396 | 1104 | 857 | 575 |
| Mosquito Pools | 6297 | 25 | 6471 | 68 |
| Horses | 91 | 45 | 40 | 2 |
| Humans | 247 | 3 | 614 | 24* |

*Two cases were in out of state residents; however, their exposure was believed to have been in Massachusetts.